

## CLAIMS

What is claimed:

1. A process for purification of a sample fraction from a chromatographic flow stream, comprising:

attaching a vessel extender to a collection vessel to form an extended vessel assembly such that the flow stream enters the vessel extender and into the collection vessel;

collecting the flow stream into the extended vessel assembly; and

evaporating liquid solvent from the extended vessel assembly in a dry down process.

2. The process of claim 1, further comprising:

mounting a plurality of the vessel assemblies in a rack for transportation within sample purification system.

3. The process of claim 1, further comprising:

determining the amount of purified compound in each collection vessel, comprising:

weighing an empty collection vessel prior to attaching the vessel extender; and

re-weighing the collection vessel after the dry down process and removal of the vessel extender.

4. The process of claim 1, further comprising:

labeling the collection vessel for tracking through the purification process using one of the following methods: bar-coding, pre-labeling, pre-etching, or a memory device such as a radio frequency tag.

5. The process of claim 1, wherein the attaching a vessel extender comprises attaching with an automated capper/decapper device that automatically attaches the vessel extender to the collection vessel.

6. The process of claim 1, wherein the collecting the sample fractions into the extended vessel assembly is performed using a fraction collector system operating at either atmospheric conditions or under a head pressure.
7. The process of claim 1, wherein said evaporating solvent from the vessel assembly in the dry down process comprises evaporating with at least one of a centrifugal vacuum evaporator, modest heat applied to the assembly, and agitation of vessel contents under a vacuum.
8. The process of claim 1, wherein, after said collecting said flow stream, a racks of extended vessel assemblies are transferred to a rough dry down station that evaporates the vessel assemblies down to dryness.
9. The process of claim 8, further comprising:  
rinsing the vessel extender with a solvent after the rough dry down process and before the dry down process to remove residue of purified compound remaining on the vessel extender into the collection vessel.
10. The process of claim 8, further comprising:  
re-solvating the collection vessel by dispensing liquid solvent into the collection vessel.
11. A system for purification of a sample fraction from a chromatographic flow stream,  
comprising:  
a collection vessel for collecting liquid phase from the flow stream;  
a vessel extender attached to the collection vessel to form an extended vessel assembly  
for storage of sample fractions from the flow stream;  
a fraction collector system to collect the sample fractions from the flow stream into the  
extended vessel assembly.

12. The system of claim 11, further comprising:  
a dry down station that evaporates the sample fractions from the extended vessel assembly in a dry down process.
13. The system of claim 12, further comprising:  
a balance automator to determine amount of purified compound remaining in the collection vessel after the dry down process by weighing the collection vessel holding the dried purified compound.
14. The system of claim 11, further comprising:  
a liquid dispensing module wherein a preservative is placed in the collection vessel after weighing in a balance automator.
15. The system of claim 11, further comprising:  
a capper/decapper module for removing and replacing the vessel extender from the collection vessel.